



LIFE CIRC-ELV

BOOSTING CIRCULAR ECONOMY OF PLASTICS FROM END-OF-LIFE VEHICLES THROUGH RECYCLING INTO HIGH ADDED-VALUE APPLICATIONS

Deliverable D_B7.2

Position paper

Legislative barriers towards circularity in ELV sector

It is an observation not depending only on legislative barriers. There is a lack today of plastics recycling processes in Europe. European countries must develop more recycling solutions for different materials (plastics...).

First, the EU COM has not a good overview over Reuse, Recycling and Recovery rates due to the lack of a harmonised reporting at the EU level.

Reporting is different from different Member States. Based on the reporting, the COM most probably do not know enough so far. Today, it's impossible to get a good idea of the ELV PP and PE recycling rates (coming from ATF and coming from shredders and Post Shredding Technologies). Only a few Member States collect this information. It is known how to do it (French reporting to be disseminated at EU level). All members of the value chain should report.

Second, definitions of Recycling / Recovery are country specific. In some countries, recycling means more than material recovery. On EU level, there is no common understanding/different interpretations of the recycling definition.

Third, even if in a country there is a network of ATF and/or shredders able to dismantle or sort some plastics (PP, PE coming from bumpers and fuel tanks), due to the big difference between the landfill costs of 2 border states, border shredders buy depolluted/dismantled ELV bodies more expensively than shredders based in the country of origin. Thus, for ATF, it is more profitable to sell ELV bodies after treatment to border shredders...and PP/PE won't be recycled...



Fourth, there are a lot of missing ELV at EU level due to illegal treatment of ELVs but not only. A lot of old vehicles are exported to another continent (Africa for example) even if they are not secure or not functional. Missing ELV are equivalent to missing materials (PP, PE) to be recycled.

Fifth, the design of vehicles has a large influence on the ability of waste operators to reuse and recycle various materials and parts of the vehicle. Different manufacturers incorporate their considerations of the end-of-life phase in different ways and to a different degree.

Today it's not needed to prove that a new model is recyclable at the expected level. Most of them only make calculations around that. More information about the exact composition is needed from car manufacturers; "new" materials are used to make vehicles lighter which is important for the manufacturers for the CO2 footprint. Despite this advantage, the end-of-life is disadvantageous.

Recommendations for EU political institutions

Recommendations linked to the different points above:

1- Harmonised Reporting at EU MS level

Each year ATFs should report on the previous year, on:

- number of vehicles that they have treated
- weight of hazardous wastes, materials (for each type of material) and parts they have removed
- shredders with which they have collaborated
- volumes of car bodies that they have sold to the different shredders etc.

Also, shredders should have to report what they've received from the different ATFs and which fractions per material they have sorted and recycled, recovered, or eliminated.

Based on the shredder reporting, numbers of efficiency of ATFs and shredders are updated per year.

Harmonised requirements for fuel tanks:

From a technical and regulatory point of view, an empty tank that contained fuel in the past is a hazardous waste and must be treated separately. The regulation should establish the same requirements for fuel tanks as for other materials, like large plastics or tyres. ATF should remove it and then deliver them to an authorized hazardous waste management company unless it has a certification from the shredding company receiving his ELV hulks indicating that they are able to sort and treat the fuel tanks in a way that they will be recycled. The shredders should be asked to remove and depollute the fuel tank (costs of collection will be higher at ATF level). The fuel tank should be removed directly before shredding anyway. Shredder can make a dedicated shredding campaign for the fuel tanks (more common), or they can work with a different company for shredding of tanks. Afterwards, PE recycling with fuel contamination is common. Removal of fuel tanks is easy with grabbers; shredders make money with it (via the recycled PE). They extract fuel tank for two reasons: For safety reasons so that the rest of the car body is not contaminated of fuel, and the PE is recyclable if extracted before shredding of the car body. The



recycling would not be ensured if all would be shredded together. It is recommended that if ATF presses hulk, it is up to them to remove tanks before pressing.

2- EU COM should ensure that clear and same definitions of reuse, recycling and recovery are used in all EU MS.

3- EU COM should ensure that EU technical requirements and rules for Post Shredding Residues landfilling are well respected in all the EU countries.

4- When a car leaves Europe, should be known if it can be used. To each EU country, it should be asked to control the road worthiness of the car that is exported. Export initiatives must proof the road worthiness at least for 3 or 6 months more.

In addition, the registries must be cleaned up. Data on number of insured cars and data on all cars registered could be linked, having information about the number of cars that have no insurance and that are missing.

To tackle the issue of missing vehicles, it seems to be necessary to calculate collection rates and define targets. To set collection rates, each member state should have to measure and report on export numbers.

5- Recyclability of a new model

Carmakers should have to check when new model is put on the market from a practical point of view whether they are recyclable in practice, e.g., a few carmakers already do practical checks. Completely dismantle new models, all parts checked whether they can be considered recyclable by the existing recycling channels... It is suggested that practical tests could be mandatory in the future.

Recyclability Targets should be allocated to the different components of a vehicle considering the average material composition of each sub-assembly. Up to the different OEM and suppliers to prove through the ISO 22628 norm that the components of the sub-assembly reach the target. The recyclability proof would remain at the vehicle level when OEM organise vehicle type-approval, but producers should allocate recyclability targets to the different components and suppliers. It would be more efficient and relevant for them to do that.

At the end, the complete vehicle must be checked in practice and not with an excel sheet. From a practical point of view, they should prove that a new model is truly recyclable.

6- Other recommendations

- It seems very important to define targets for recycled materials incorporation in new models. Thus, carmakers and their suppliers must source recycled materials, defining a specific incentive / using recycled plastics coming from ELV.

- Through EPR, carmakers should have to make plastics (PP, PE) closing the loop feasible from both technical and financial point of view.

7- ELV plastics could become a profitable waste stream and the ATFs, and the shredders should be allowed to compete for it as they already do with other waste streams (mainly ferrous and nonferrous metals). Mandatory separation of certain plastics at ATFs could lead to different problems:

a. Small ATFs will produce very low amounts of a light material with low price and the transportation of this small quantities from thousands of ATFs will have a negative environmental impact while having an extra cost that may not be necessary if the shredding and



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post-shredding facilities they work with have separation systems for plastics (which are increasing rapidly).

b. For big ATFs it could be a competitive advantage with respect to shredders to have an important fraction of the ELV plastics secured. They will always have the possibility to extract whatever they are interested in from ELVs, but shredders should have the chance to “fight” for those materials by paying more to the ATF if those materials are left in the hulks.

c. What is needed is a higher control on ATFs and shredders to make sure that if the shredding and post-shredding facility they work with is not able to sort and effectively recycle or recover the plastic fraction of ELVs, large plastic parts have to be separated and sent to recycling by the ATF.